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                   August
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 NEWS  7  AUG 30   CASREACT - Enhanced with displayable reaction conditions
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               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
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FILE 'HOME' ENTERED AT 18:08:56 ON 14 SEP 2005

=> file ca, uspatfull, biosis, medline
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=> s vitamin B6
L1        19365 VITAMIN B6

=> s (pyridoxamine or pyridoxal############)
L2        34946 (PYRIDOXAMINE OR PYRIDOXAL############)
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=> s (verapamil or amlodipine or diltiazem)
L3       87342 (VERAPAMIL OR AMLODIPINE OR DILTIAZEM)

=> s l2 and l3
L4         301 L2 AND L3

=> s l4 and hypertrophy
L5         141 L4 AND HYPERTROPHY

=> s l1 and l5
L6           1 L1 AND L5

=> s l2 and ((vitamin E) or (vitamin C))
L7         794 L2 AND ((VITAMIN E) OR (VITAMIN C))

=> s l7 and hypertrophy
L8          58 L7 AND HYPERTROPHY

=> s l2 and (atenolol or metoprolol or propanolol)
L9         251 L2 AND (ATENOLOL OR METOPROLOL OR PROPANOLOL)

=> s l9 and hypertrophy
L10        145 L9 AND HYPERTROPHY

=> s l10 or l8 or l5
L11        182 L10 OR L8 OR L5

=> dup remove l11
PROCESSING COMPLETED FOR L11
L12        182 DUP REMOVE L11 (0 DUPLICATES REMOVED)

=> s l12 and vitamin B6
L13          8 L12 AND VITAMIN B6

=> s l12 and (congestive(6a)heart)
L14        138 L12 AND (CONGESTIVE(6A) HEART)

=> s l14 and l1
L15          1 L14 AND L1

=> s l14 and homocysteine
L16         13 L14 AND HOMOCYSTEINE

=> s l14 and microvasculature
L17          3 L14 AND MICROVASCULATURE

=> s l17 or l16 or l15 or l13 or l6
L18         20 L17 OR L16 OR L15 OR L13 OR L6

=> dup remove l18
PROCESSING COMPLETED FOR L18
L19          20 DUP REMOVE L18 (0 DUPLICATES REMOVED)

=> s l14 and vasodilator
L20         25 L14 AND VASODILATOR

=> s l19 or l20
L21         38 L19 OR L20

=> s l21 not l19
```

L22 18 L21 NOT L19

=> **d l19 1-18 bib,ab**

L19 ANSWER 1 OF 20 USPATFULL on STN

Full Text | Citing References

AN 2005:220892 USPATFULL
TI Enzymes
IN Yang, Junming, San Jose, CA, UNITED STATES
Dyung Lu, Aina M., San Jose, CA, UNITED STATES
Yue, Henry, Sunnyvale, CA, UNITED STATES
Elliott, Vicki S., San Jose, CA, UNITED STATES
Warren, Bridget A., Encinitas, CA, UNITED STATES
Duggan, Brendan M., Sunnyvale, CA, UNITED STATES
Forsythe, Ian J., Redwood City, CA, UNITED STATES
Lee, Ernestine A., Castro Valley, CA, UNITED STATES
Hafalia, April J.A., Santa Clara, CA, UNITED STATES
Ramkumar, Jayalaxmi, Fremont, CA, UNITED STATES
Chawla, Narinder K., Union City, CA, UNITED STATES
Baughn, Mariah R., San Leandro, CA, UNITED STATES
Becha, Shanya D., Castro Valley, CA, UNITED STATES
Gorvad, Ann E., Livermore, CA, UNITED STATES
Tran, Uyen K., San Jose, CA, UNITED STATES
Li, Joana X., San Francisco, CA, UNITED STATES
Yao, Monique G., Carmel, IN, UNITED STATES
Ison, Craig H., San Jose, CA, UNITED STATES
Griffin, Jennifer A., Fremont, CA, UNITED STATES
Lee, Soo Yeun, Daly City, CA, UNITED STATES
Chang, Hsin-Ru, Belmont, CA, UNITED STATES
Emerling, Brooke M., Palo Alto, CA, UNITED STATES
Tang, Tom Y., San Jose, CA, UNITED STATES
Lal, Preeti G., Santa Clara, CA, UNITED STATES
Kable, Amy E., San Francisco, CA, UNITED STATES
Marquis, Joseph P., San Jose, CA, UNITED STATES
Jiang, Xin, Saratoga, CA, UNITED STATES
Jackson, Alan A., Los Gatos, CA, UNITED STATES
Zebarjadian, Yeganeh, San Francisco, CA, UNITED STATES
Swarnakar, Anita, San Francisco, CA, UNITED STATES
Wilson, Amy D., Belmont, CA, UNITED STATES
Jin, Pei, Palo Alto, CA, UNITED STATES
Richardson, Thomas W., Redwood City, CA, UNITED STATES
Bhatia, Umesh, San Jose, CA, UNITED STATES
Burrill, John D., Redwood City, CA, UNITED STATES
Lee, Sally, San Francisco, CA, UNITED STATES
Blake, Julie J., San Francisco, CA, UNITED STATES
Ho, Anne, Sunnyvale, CA, UNITED STATES
Zheng, Wenjin, Mountain View, CA, UNITED STATES
Gao, Jin, Sunnyvale, CA, UNITED STATES
PA Incyte Corporation, Palo Alto, CA, UNITED STATES, 94304 (U.S. corporation)
PI US 2005191627 A1 20050901
AI US 2003-491183 A1 20020926 (10)
WO 2002-US31096 20020926
20040329 PCT 371 date
PRAI US 2003-326388P 20010928 (60)
US 2003-328979P 20011012 (60)
US 2003-346034P 20011019 (60)
US 2003-348284P 20011026 (60)
US 2003-338048P 20011108 (60)

US 2003-332340P 20011116 (60)
US 2003-368799P 20020329 (60)
US 2003-368722P 20020329 (60)
US 2003-381588P 20020517 (60)
US 2003-387119P 20020607 (60)
US 2003-390662P 20020621 (60)
DT Utility
FS APPLICATION
LREP INCYTE CORPORATION, EXPERIMENTAL STATION, ROUTE 141 & HENRY CLAY ROAD, BLDG. E336, WILMINGTON, DE, 19880, US
CLMN Number of Claims: 30
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 19139
AB Various embodiments of the invention provide human enzymes (ENZM) and polynucleotides which identify and encode ENZM. Embodiments of the invention also provide expression vectors, host cells, antibodies, agonists, and antagonists. Other embodiments provide methods for diagnosing, treating, or preventing disorders associated with aberrant expression of ENZM.

L19 ANSWER 2 OF 20 USPATFULL on STN

Full Text | Citing References

AN 2005:220634 USPATFULL
TI Compositions comprising **vitamin E** and saw palmetto
IN Harvey, Bryce M., Pike Road, AL, UNITED STATES
PA ProEthic Laboratories, L.L.C., Montgomery, AL, UNITED STATES (U.S. corporation)
PI US 2005191369 A1 20050901
AI US 2004-932219 A1 20040901 (10)
RLI Continuation-in-part of Ser. No. US 2004-832950, filed on 27 Apr 2004, PENDING Continuation-in-part of Ser. No. US 2004-787350, filed on 26 Feb 2004, PENDING
DT Utility
FS APPLICATION
LREP KING & SPALDING LLP, 191 PEACHTREE STREET, N.E., 45TH FLOOR, ATLANTA, GA, 30303-1763, US
CLMN Number of Claims: 31
ECL Exemplary Claim: 1
DRWN 1 Drawing Page(s)
LN.CNT 1037
AB Methods, compositions, and processes for preparing compositions that comprise **Vitamin E** and optionally saw palmetto. The compositions are preferably formulated with a zinc compound and a selenium compound.

L19 ANSWER 3 OF 20 USPATFULL on STN

Full Text | Citing References

AN 2005:125053 USPATFULL
TI Pyridoxine and **pyridoxal** analogues: new uses
IN Haque, Wasimul, Edmonton, CANADA
PA Medicure International Inc., Winnipeg, CANADA (non-U.S. corporation)
PI US 2005107443 A1 20050519
AI US 2004-16737 A1 20041221 (11)
RLI Division of Ser. No. US 2003-411552, filed on 10 Apr 2003, PENDING Continuation-in-part of Ser. No. US 2002-147263, filed on 15 May 2002, GRANTED, Pat. No. US 6548519 Continuation-in-part of Ser. No. US 2001-900718, filed on 6 Jul 2001, GRANTED, Pat. No. US 6417204
PRAI US 2000-216907P 20000707 (60)

DT Utility
FS APPLICATION
LREP Attn: Ronald A. Daignault, MERCHANT & GOULD P.C., P.O. Box 2903, Minneapolis, MN, 55402-0903, US
CLMN Number of Claims: 49
ECL Exemplary Claim: 1
DRWN 1 Drawing Page(s)
LN.CNT 1786
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides **pyridoxal** and pyridoxine analogues, pharmaceutical compositions containing pyridoxine and **pyridoxal** analogues, and methods of administering pharmaceutical compositions containing a therapeutically effective amount of at least one of these analogues. In accordance with the present invention, the **pyridoxal** and pyridoxine analogues can be used in the treatment or prevention of of heparin induced thrombocytopenia (HIT), stroke, and ischemia, and in the treatment of symptoms thereof. The the **pyridoxal** and pyridoxine analogues can be used in neuroprotection.

L19 ANSWER 4 OF 20 USPATFULL on STN

Full Text | Citing References

AN 2005:22884 USPATFULL
TI Use of an aqueous or hydroalcoholic extract from bauhinia for the preparation of a composition
IN Wirth, Corinna, Darmstadt, GERMANY, FEDERAL REPUBLIC OF
Buchholz, Herwig, Frankfurt, GERMANY, FEDERAL REPUBLIC OF
PI US 2005019426 A1 20050127
AI US 2004-876632 A1 20040628 (10)
PRAI DE 2003-10329955 20030703
DT Utility
FS APPLICATION
LREP MILLEN, WHITE, ZELANO & BRANIGAN, P.C., 2200 CLARENDON BLVD., SUITE 1400, ARLINGTON, VA, 22201
CLMN Number of Claims: 29
ECL Exemplary Claim: 1
DRWN 1 Drawing Page(s)
LN.CNT 1670
AB The present invention relates to a composition comprising an aqueous or hydroalcoholic extract of bauhinia and to the use of an aqueous or hydroalcoholic extract of bauhinia for the preparation of a composition for the care, preservation or improvement of the general state of the skin or hair, for the prophylaxis or prevention of human skin or human hair ageing processes and for the prophylaxis and/or treatment of diseases associated with skin ageing.

L19 ANSWER 5 OF 20 USPATFULL on STN

Full Text | Citing References

AN 2004:298768 USPATFULL
TI Composition comprising soy and use thereof in the provention and/or treatment of various diseases
IN Hoie, Lars Henrik, Blenheim, UNITED KINGDOM
PI US 2004234631 A1 20041125
AI US 2004-482537 A1 20040628 (10)
WO 2002-IB2587 20020703
PRAI EP 2001-610069 20010703
DT Utility
FS APPLICATION
LREP Gabor L. Szekeres, Law Offices of Gabor L. Szekeres, Suite 112, 8141

Kaiser Boulevard, Anaheim, CA, 92808
CLMN Number of Claims: 84
ECL Exemplary Claim: 1
DRWN 25 Drawing Page(s)
LN.CNT 5037
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention concerns soy protein, phytoestrogens, phospholipids, and dietary fibers and compositions thereof suitable for preventing, treating and/or alleviating cardiovascular diseases such as hypercholesterolemia, hypertriglyceridemia, hyperlipidemia arteriosclerosis, hypertension and related cardiovascular diseases, for preventing and/or treating type 2 diabetes and/or the metabolic syndrome, and for preventing, treating and/or alleviating pulmonary diseases.

L19 ANSWER 6 OF 20 USPATFULL on STN

Full Text | Citing References

AN 2004:57011 USPATFULL
TI Metabolic uncoupling therapy
IN McCleary, Edward Larry, Golden, CO, UNITED STATES
PI US 2004043013 A1 20040304
AI US 2003-462958 A1 20030617 (10)
RLI Continuation-in-part of Ser. No. US 2000-749584, filed on 28 Dec 2000, GRANTED, Pat. No. US 6579866
DT Utility
FS APPLICATION
LREP PATTON BOGGS, PO BOX 270930, LOUISVILLE, CO, 80027
CLMN Number of Claims: 40
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 2134
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A combination of chemical agents reduces reductive stress by limiting the accumulation of high-energy electrons potentially available to the electron transport chain. A method of metabolic uncoupling therapy comprises: analyzing a specific physiologic process involving reductive stress; identifying a plurality of MUT agents that modulate metabolic pathways by influencing electron flux; and formulating a combination of MUT agents that limits the accumulation of high-energy electrons potentially available to the electron transport chain.

L19 ANSWER 7 OF 20 USPATFULL on STN

Full Text | Citing References

AN 2004:45037 USPATFULL
TI Formulations for the prevention and treatment of insulin resistance and type 2 diabetes mellitus
IN Richardson, Kenneth T., Anchorage, AK, UNITED STATES
Pearson, Don C., Lakewood, WA, UNITED STATES
PA ChronoRX LLC, Anchorage, AK (U.S. corporation)
PI US 2004034030 A1 20040219
AI US 2003-630436 A1 20030730 (10)
RLI Division of Ser. No. US 2001-33730, filed on 2 Nov 2001, PENDING
PRAI US 2000-245471P 20001103 (60)
US 2000-245950P 20001103 (60)
US 2000-256033P 20001213 (60)
DT Utility
FS APPLICATION
LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH

FLOOR, SAN FRANCISCO, CA, 94111-3834
CLMN Number of Claims: 104
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 4462
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The compositions and dosage forms of the invention are clinically useful as methods for increasing the effectiveness, efficiency and safety of biguanides (metformin) and/or sulfonylureas in the prevention and treatment of insulin resistance and diabetes mellitus, alone or in combination, as a nutrient for humans. The carefully chosen active ingredients of the invention are designed in a modular fashion to prevent and rectify adverse events associated with insulin resistance syndrome and diabetes mellitus, and with the clinical use of biguanides (metformin) and/or the sulfonylureas. These modules are: (1) Mitochondrial Metabolic Group, (2) Plasma and Mitochondrial Membrane Integrity Group, (3) Nocturnal Group and, (4) Insulin Alternative Group. When used in concert with a biguanide, a sulfonylurea or with a combination of both, the invention will broaden the clinical usefulness of these drugs. The invention will retard the progression of insulin resistance to type 2 diabetes, and reduce the serious microvascular and macrovascular complications commonly associated with insulin resistance syndrome and diabetes mellitus.

L19 ANSWER 8 OF 20 USPATFULL on STN

Full Text | Citing References

AN 2004:13492 USPATFULL
TI Pyridoxine and **pyridoxal** analogues: new uses
IN Haque, Wasimul, Edmonton, CANADA
PI US 2004010015 A1 20040115
US 6897228 B2 20050524
AI US 2003-411552 A1 20030410 (10)
RLI Continuation-in-part of Ser. No. US 2001-900718, filed on 6 Jul 2001, GRANTED, Pat. No. US 6417204 Continuation-in-part of Ser. No. US 2002-147263, filed on 15 May 2002, GRANTED, Pat. No. US 6548519
DT Utility
FS APPLICATION
LREP MERCHANT & GOULD PC, P.O. BOX 2903, MINNEAPOLIS, MN, 55402-0903
CLMN Number of Claims: 40
ECL Exemplary Claim: 1
DRWN 1 Drawing Page(s)
LN.CNT 1779
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides **pyridoxal** and pyridoxine analogues, pharmaceutical compositions containing pyridoxine and **pyridoxal** analogues, and methods of administering pharmaceutical compositions containing a therapeutically effective amount of at least one of these analogues. In accordance with the present invention, the **pyridoxal** and pyridoxine analogues can be used in the treatment or prevention of of heparin induced thrombocytopenia (HIT, stroke, and ischemia, and in the treatment of symptoms thereof. The the **pyridoxal** and pyridoxine analogues can be used in neuroprotection.

L19 ANSWER 9 OF 20 USPATFULL on STN

Full Text | Citing References

AN 2003:277209 USPATFULL
TI **Pyridoxal** analogues and methods of treatment
IN Haque, Wasimul, Edmonton, CANADA

PA Medicure Inc., Winnipeg, CANADA (non-U.S. corporation)
The University of Manitoba, Winnipeg, CANADA (non-U.S. corporation)
PI US 2003195236 A1 20031016
AI US 2003-453414 A1 20030603 (10)
RLI Continuation of Ser. No. US 2001-863093, filed on 22 May 2001, PENDING
Division of Ser. No. US 2000-520194, filed on 7 Mar 2000, GRANTED, Pat. No. US 6339085
PRAI US 1999-125881P 19990324 (60)
US 1999-123698P 19990308 (60)
DT Utility
FS APPLICATION
LREP Attention: Anna M. Nelson, MERCHANT & GOULD P.C., P.O. Box 2903, Minneapolis, MN, 55402-0903
CLMN Number of Claims: 108
ECL Exemplary Claim: 1
DRWN 4 Drawing Page(s)
LN.CNT 1356
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB **Pyridoxal** analogues can be useful for treating B_6 deficiency and related diseases; cardiovascular and related diseases; melanoma and related diseases; and symptoms thereof. One such analogue is a compound of the formula: ##STR1##

or a pharmaceutically acceptable acid addition salt thereof, in which R_1 is alkyl, alkenyl, in which alkyl or alkenyl can be interrupted by nitrogen, oxygen, or sulfur, and can be substituted at the terminal carbon by hydroxy, alkoxy, alkanoyloxy, alkanoyloxyaryl, alkoxyalkanoyl, alkoxycarbonyl, or dialkylcarbamoyloxy; alkoxy; dialkylamino; alkanoyloxy; alkanoyloxyaryl; alkoxyalkanoyl; alkoxycarbonyl; dialkylcarbamoyloxy; or aryl, aryloxy, arylthio, or aralkyl, in which aryl can be substituted by alkyl, alkoxy, amino, hydroxy, halo, nito, or alkanoyloxy. These analogues can be administered, either alone or concurrently with known medications, to treat the above-described diseases.

L19 ANSWER 10 OF 20 USPATFULL on STN

Full Text | Citing References

AN 2003:113528 USPATFULL
TI Biguanide and sulfonylurea formulations for the prevention and treatment of insulin resistance and type 2 diabetes mellitus
IN Pearson, Don C., Lakewood, WA, UNITED STATES
Richardson, Kenneth T., Anchorage, AK, UNITED STATES
PA ChronoRX, LLC, Anchorage, AK, UNITED STATES (U.S. corporation)
PI US 2003078269 A1 20030424
US 6693094 B2 20040217
AI US 2002-93476 A1 20020307 (10)
PRAI US 2001-278270P 20010322 (60)
US 2001-278271P 20010322 (60)
US 2001-278296P 20010322 (60)
DT Utility
FS APPLICATION
LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834
CLMN Number of Claims: 130
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 4927
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention describes formulations that include either metformin,

sulfonylurea or a biguanide-sulfonylurea combination as one active ingredient in addition to specific, other active ingredients. The compositions and dosage forms of the invention are clinically useful as methods for increasing the effectiveness, efficiency and safety of the included biguanide (metformin) and/or sulfonylurea in the prevention and treatment of insulin resistance and diabetes mellitus. The carefully chosen additional active ingredients of the invention are designed in a modular fashion to prevent and rectify adverse events associated with insulin resistance syndrome and diabetes mellitus, and those adverse incidences associated with the concurrent use of metformin and/or the sulfonylureas. When clinically administered, the invention will provide therapeutic levels of metformin and of a sulfonylurea, alone or in combination, and broaden their usefulness. The invention will retard the progression of insulin resistance to type 2 diabetes, and reduce the serious microvascular and macrovascular complications commonly associated with insulin resistance syndrome and diabetes mellitus.

L19 ANSWER 11 OF 20 USPATFULL on STN

Full Text | Citing References

AN 2003:112870 USPATFULL
TI Nucleic acids, proteins, and antibodies
IN Rosen, Craig A., Laytonsville, MD, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES
Barash, Steven C., Rockville, MD, UNITED STATES
PA Human Genome Sciences, Inc., Rockville, MD (U.S. corporation)
PI US 2003077602 A1 20030424
AI US 2002-73961 A1 20020214 (10)
RLI Continuation of Ser. No. US 2001-764887, filed on 17 Jan 2001, ABANDONED
PRAI US 2000-179065P 20000131 (60)
US 2000-180628P 20000204 (60)
US 2000-214886P 20000628 (60)
US 2000-217487P 20000711 (60)
US 2000-225758P 20000814 (60)
US 2000-220963P 20000726 (60)
US 2000-217496P 20000711 (60)
US 2000-225447P 20000814 (60)
US 2000-218290P 20000714 (60)
US 2000-225757P 20000814 (60)
US 2000-226868P 20000822 (60)
US 2000-216647P 20000707 (60)
US 2000-225267P 20000814 (60)
US 2000-216880P 20000707 (60)
US 2000-225270P 20000814 (60)
US 2000-251869P 20001208 (60)
US 2000-235834P 20000927 (60)
US 2000-234274P 20000921 (60)
US 2000-234223P 20000921 (60)
US 2000-228924P 20000830 (60)
US 2000-224518P 20000814 (60)
US 2000-236369P 20000929 (60)
US 2000-224519P 20000814 (60)
US 2000-220964P 20000726 (60)
US 2000-241809P 20001020 (60)
US 2000-249299P 20001117 (60)
US 2000-236327P 20000929 (60)
US 2000-241785P 20001020 (60)
US 2000-244617P 20001101 (60)
US 2000-225268P 20000814 (60)
US 2000-236368P 20000929 (60)

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US 2000-251868P	20001208	(60)
US 2000-229344P	20000901	(60)
US 2000-234997P	20000925	(60)
US 2000-229343P	20000901	(60)
US 2000-229345P	20000901	(60)
US 2000-229287P	20000901	(60)
US 2000-229513P	20000905	(60)
US 2000-231413P	20000908	(60)
US 2000-229509P	20000905	(60)
US 2000-236367P	20000929	(60)
US 2000-237039P	20001002	(60)
US 2000-237038P	20001002	(60)
US 2000-236370P	20000929	(60)
US 2000-236802P	20001002	(60)
US 2000-237037P	20001002	(60)
US 2000-237040P	20001002	(60)
US 2000-240960P	20001020	(60)
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US 2000-241787P	20001020	(60)
US 2000-246474P	20001108	(60)
US 2000-246532P	20001108	(60)
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US 2000-249210P	20001117	(60)
US 2000-226681P	20000822	(60)
US 2000-225759P	20000814	(60)
US 2000-225213P	20000814	(60)
US 2000-227182P	20000822	(60)
US 2000-225214P	20000814	(60)
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US 2000-246524P	20001108	(60)
US 2000-246478P	20001108	(60)
US 2000-246609P	20001108	(60)
US 2000-246613P	20001108	(60)
US 2000-249300P	20001117	(60)
US 2000-249265P	20001117	(60)
US 2000-246610P	20001108	(60)
US 2000-246611P	20001108	(60)
US 2000-230437P	20000906	(60)
US 2000-251990P	20001208	(60)
US 2000-251988P	20001205	(60)
US 2000-251030P	20001205	(60)
US 2000-251479P	20001206	(60)
US 2000-256719P	20001205	(60)
US 2000-250160P	20001201	(60)
US 2000-251989P	20001208	(60)
US 2000-250391P	20001201	(60)
US 2000-254097P	20001211	(60)
US 2000-231968P	20000912	(60)
US 2000-226279P	20000818	(60)
US 2000-186350P	20000302	(60)
US 2000-184664P	20000224	(60)
US 2000-189874P	20000316	(60)
US 2000-198123P	20000418	(60)
US 2000-227009P	20000823	(60)
US 2000-235484P	20000926	(60)
US 2000-190076P	20000317	(60)
US 2000-209467P	20000607	(60)
US 2000-205515P	20000519	(60)
US 2001-259678P	20010105	(60)

DT Utility
FS APPLICATION
LREP HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
CLMN Number ~~of~~ Claims: 24
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 19799
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to novel liver related polynucleotides and the polypeptides encoded by these polynucleotides herein collectively known as "liver antigens," and the use of such liver antigens for detecting disorders of the liver, particularly the presence of cancer of liver and cancer metastases. More specifically, isolated liver associated nucleic acid molecules are provided encoding novel liver associated polypeptides. Novel liver polypeptides and antibodies that

bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human liver associated polynucleotides and/or polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the liver, including cancer of liver tissues, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The present invention further relates to methods and/or compositions for inhibiting the production and function of the polypeptides of the present invention.

L19 ANSWER 12 OF 20 USPATFULL on STN

Full Text | Citing References

AN 2003:112605 USPATFULL
TI Formulations for the prevention and treatment of insulin resistance and type 2 diabetes mellitus
IN Richardson, Kenneth T., Anchorage, AK, UNITED STATES
Pearson, Don C., Lakewood, WA, UNITED STATES
PA ChronoRX LLC, Anchorage, AK (U.S. corporation)
PI US 20030077335 A1 20030424
US 6689385 B2 20040210
AI US 2001-33730 A1 20011102 (10)
PRAI US 2000-245471P 20001103 (60)
US 2000-245950P 20001103 (60)
US 2000-256033P 20001213 (60)
DT Utility
FS APPLICATION
LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834
CLMN Number of Claims: 104
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 4450
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The compositions and dosage forms of the invention are clinically useful as methods for increasing the effectiveness, efficiency and safety of biguanides (metformin) and/or sulfonylureas in the prevention and treatment of insulin resistance and diabetes mellitus, alone or in combination, as a nutrient for humans. The carefully chosen active ingredients of the invention are designed in a modular fashion to prevent and rectify adverse events associated with insulin resistance syndrome and diabetes mellitus, and with the clinical use of biguanides (metformin) and/or the sulfonylureas. These modules are: (1) Mitochondrial Metabolic Group, (2) Plasma and Mitochondrial Membrane Integrity Group, (3) Nocturnal Group and, (4) Insulin Alternative Group. When used in concert with a biguanide, a sulfonylurea or with a combination of both, the invention will broaden the clinical usefulness of these drugs. The invention will retard the progression of insulin resistance to type 2 diabetes, and reduce the serious microvascular and macrovascular complications commonly associated with insulin resistance syndrome and diabetes mellitus.

L19 ANSWER 13 OF 20 USPATFULL on STN

Full Text | Citing References

AN 2003:136822 USPATFULL
TI Nutritional supplement for children
IN Chandra, Ranjit Kumar, Harvana, INDIA

PA Tsar Health Private Ltd., INDIA (non-U.S. corporation)
PI US 6565891 B1 20030520
AI US 2002-226195 20020823 (10)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Pak, John
LREP Liniak, Berenato & White
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 748
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A multinutrient nutritional supplement is provided that is designed to be most effective in optimizing health, increasing the immunity and decreasing the instances and severity of infection particularly among children.

L19 ANSWER 14 OF 20 USPATFULL on STN

Full Text | Citing References

AN 2003:129702 USPATFULL
TI Nutritional supplement for adolescents
IN Chandra, Renjit Kumar, Gurgaon, INDIA
PA TSAR Health Private Ltd., INDIA (non-U.S. corporation)
PI US 6562378 B1 20030513
AI US 2002-219502 20020816 (10)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Pak, John
LREP Liniak, Berenato & White
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 763
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A multinutrient nutritional supplement is provided that is designed to be most effective in optimizing health, increasing the immunity and decreasing the instances and severity of infection particularly among adolescents.

L19 ANSWER 15 OF 20 USPATFULL on STN

Full Text | Citing References

AN 2003:102386 USPATFULL
TI Pyridoxine and **pyridoxal** analogues: novel uses
IN Haque, Wasimul, Edmonton, CANADA
PA Medicure International Inc., West Indies, BARBADOS (non-U.S. corporation)
PI US 6548519 B1 20030415
AI US 2002-147263 20020515 (10)
RLI Continuation-in-part of Ser. No. US 2001-900718, filed on 6 Jul 2001, now patented, Pat. No. US 6417204
DT Utility
FS GRANTED
EXNAM Primary Examiner: Davis, Zinna Northington
LREP Merchant & Gould P.C.
CLMN Number of Claims: 8
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 1809

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention provides **pyridoxal** and pyridoxine analogues, pharmaceutical compositions containing pyridoxine and **pyridoxal** analogues, and methods of administering pharmaceutical compositions containing a therapeutically effective amount of at least one of these analogues. In accordance with the present invention, the **pyridoxal** and pyridoxine analogues can be used in the treatment of undesired platelet aggregation, and in the treatment of symptoms thereof.

L19 ANSWER 16 OF 20 USPATFULL on STN

Full Text | Citing References

AN 2002:119882 USPATFULL

TI Dosage forms useful for modifying conditions and functions associated with hearing loss and/or tinnitus

IN Pearson, Don C., Lakewood, WA, UNITED STATES
Richardson, Kenneth T., Anchorage, AK, UNITED STATES

PI US 2002061870 A1 20020523
US 6524619 B2 20030225

AI US 2001-765974 A1 20010119 (9)

PRAI US 2000-178487P 20000127 (60)

DT Utility

FS APPLICATION

LREP M. Henry Heines, TOWNSEND and TOWNSEND and CREW LLP, Two Embarcadero Center, 8th Floor, San Francisco, CA, 94111-3834

CLMN Number of Claims: 16

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 2057

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention defines interdependent biofactors and biomolecules, and clinically useful formulations that are comprised of them. The active agents are demonstrated to be complementary in their physiologic functions especially as these relate to the quenching of free radicals and to the support of endothelial physiology, the reduction of hyperinsulinemia and improvements in vascular health. The active components of the invention are selected for inclusion in precise combinations specifically because they improve these various conditions and physiological functions, and by so doing reduce a variety of risks associated with hearing loss and tinnitus. The resulting enhancement of general systemic vascular health, improvement in local VIIIth nerve vascular health, modulation of conditions surrounding blood fluid dynamics, the consequences of hyperinsulinemia, and improvements in free radical defenses, all reduce the potential for cochlear hair cell death and VIIIth nerve atrophy, and the hearing loss and possible deafness that accompany them.

L19 ANSWER 17 OF 20 USPATFULL on STN

Full Text | Citing References

AN 2002:78442 USPATFULL

TI Nucleic acids, proteins, and antibodies

IN Rosen, Craig A., Laytonsville, MD, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES
Barash, Steven C., Rockville, MD, UNITED STATES

PI US 2002042096 A1 20020411

AI US 2001-764887 A1 20010117 (9)

PRAI US 2000-179065P 20000131 (60)
US 2000-180628P 20000204 (60)
US 2000-214886P 20000628 (60)

US 2000-217487P 20000711 (60)
US 2000-225758P 20000814 (60)
US 2000-220963P 20000726 (60)
US 2000-217496P 20000711 (60)
US 2000-225447P 20000814 (60)
US 2000-218290P 20000714 (60)
US 2000-225757P 20000814 (60)
US 2000-226868P 20000822 (60)
US 2000-216647P 20000707 (60)
US 2000-225267P 20000814 (60)
US 2000-216880P 20000707 (60)
US 2000-225270P 20000814 (60)
US 2000-251869P 20001208 (60)
US 2000-235834P 20000927 (60)
US 2000-234274P 20000921 (60)
US 2000-234223P 20000921 (60)
US 2000-228924P 20000830 (60)
US 2000-224518P 20000814 (60)
US 2000-236369P 20000929 (60)
US 2000-224519P 20000814 (60)
US 2000-220964P 20000726 (60)
US 2000-241809P 20001020 (60)
US 2000-249299P 20001117 (60)
US 2000-236327P 20000929 (60)
US 2000-241785P 20001020 (60)
US 2000-244617P 20001101 (60)
US 2000-225268P 20000814 (60)
US 2000-236368P 20000929 (60)
US 2000-251856P 20001208 (60)
US 2000-251868P 20001208 (60)
US 2000-229344P 20000901 (60)
US 2000-234997P 20000925 (60)
US 2000-229343P 20000901 (60)
US 2000-229345P 20000901 (60)
US 2000-229287P 20000901 (60)
US 2000-229513P 20000905 (60)
US 2000-231413P 20000908 (60)
US 2000-229509P 20000905 (60)
US 2000-236367P 20000929 (60)
US 2000-237039P 20001002 (60)
US 2000-237038P 20001002 (60)
US 2000-236370P 20000929 (60)
US 2000-236802P 20001002 (60)
US 2000-237037P 20001002 (60)
US 2000-237040P 20001002 (60)
US 2000-240960P 20001020 (60)
US 2000-239935P 20001013 (60)

DT Utility
FS APPLICATION
LREP HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
CLMN Number of Claims: 24
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 19583
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to novel liver related polynucleotides and the polypeptides encoded by these polynucleotides herein collectively known as "liver antigens," and the use of such liver antigens for detecting disorders of the liver, particularly the presence of cancer of liver and cancer metastases. More specifically, isolated liver

associated nucleic acid molecules are provided encoding novel liver associated polypeptides. Novel liver polypeptides and antibodies that bind to these polypeptides are provided. Also provided are vectors, host cells, and recombinant and synthetic methods for producing human liver associated polynucleotides and/or polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing, treating, preventing and/or prognosing disorders related to the liver, including cancer of liver tissues, and therapeutic methods for treating such disorders. The invention further relates to screening methods for identifying agonists and antagonists of polynucleotides and polypeptides of the invention. The present invention further relates to methods and/or compositions for inhibiting the production and function of the polypeptides of the present invention.

L19 ANSWER 18 OF 20 USPATFULL on STN

Full Text | Citing References

AN 2002:168238 USPATFULL
TI Pyridoxine AMD **pyridoxal** analogues: cardiovascular therapeutics
IN Haque, Wasimul, Edmonton, CANADA
PA Medicure International Inc., St. James, BARBADOS (non-U.S. corporation)
PI US 6417204 B1 20020709
AI US 2001-900718 20010706 (9)
PRAI US 2000-216907P 20000707 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Davis, Zinna Northington
LREP Merchant & Gould, P.C.
CLMN Number of Claims: 41
ECL Exemplary Claim: 1
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 1554
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides **pyridoxal** and pyridoxine analogues, pharmaceutical compositions containing pyridoxine and **pyridoxal** analogues, and methods of administering pharmaceutical compositions containing a therapeutically effective amount of at least one of these analogues. In accordance with the present invention, the **pyridoxal** and pyridoxine analogues can be used in the treatment of cardiovascular or related diseases and in the treatment of symptoms thereof.

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(FILE 'HOME' ENTERED AT 18:08:56 ON 14 SEP 2005)

FILE 'CA, USPATFULL, BIOSIS, MEDLINE' ENTERED AT 18:09:35 ON 14 SEP 2005
L1 19365 S VITAMIN B6
L2 34946 S (PYRIDOXAMINE OR PYRIDOXAL##########)
L3 87342 S (VERAPAMIL OR AMLODIPINE OR DILTIAZEM)
L4 301 S L2 AND L3
L5 141 S L4 AND HYPERTROPHY
L6 1 S L1 AND L5
L7 794 S L2 AND ((VITAMIN E) OR (VITAMIN C))
L8 58 S L7 AND HYPERTROPHY
L9 251 S L2 AND (ATENOLOL OR METOPROLOL OR PROPANOLOL)
L10 145 S L9 AND HYPERTROPHY
L11 182 S L10 OR L8 OR L5
L12 182 DUP REMOVE L11 (0 DUPLICATES REMOVED)
L13 8 S L12 AND VITAMIN B6

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L14          138 S L12 AND (CONGESTIVE(6A)HEART)
L15            1 S L14 AND L1
L16           13 S L14 AND HOMOCYSTEINE
L17            3 S L14 AND MICROVASCULATURE
L18           20 S L17 OR L16 OR L15 OR L13 OR L6
L19           20 DUP REMOVE L18 (0 DUPLICATES REMOVED)
L20           25 S L14 AND VASODILATOR
L21           38 S L19 OR L20
L22           18 S L21 NOT L19

=> d l19 19-20 bib,ab

L19  ANSWER 19 OF 20  USPATFULL on STN
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Full Text | Citing References

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AN      2002:9870  USPATFULL
TI      Therapeutics for cardiovascular and related diseases
IN      Haque, Wasimul, Edmonton,Alberta, CANADA
PA      The University of Manitoba, Winnepeg, CANADA (non-U.S. corporation)
        Medicore Inc., Winnepeg, CANADA (non-U.S. corporation)
PI      US 6339085          B1   20020115
AI      US 2000-520194           20000307 (9)
PRAI    US 1999-125881P     19990324 (60)
        US 1999-123698P     19990308 (60)
DT      Utility
FS      GRANTED
EXNAM   Primary Examiner: Lambkin, Deborah C.; Assistant Examiner: Wright, Sonya
        N.
LREP    Merchant & Gould P. C.
CLMN    Number of Claims: 57
ECL     Exemplary Claim: 1
DRWN    4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 1249
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB      Pyridoxal analogues can be useful for treating B6 efficiency and
        related diseases; cardiovascular and related diseases; melanoma and
        related diseases; and symptoms thereof. One such analogue is a compound
        of the formula:  ##STR1##

        or a pharmaceutically acceptable acid addition salt thereof, in which
        R1 is alkyl, alkenyl, in which alkyl or alkenyl can be interrupted
        by nitrogen, oxygen, or sulfur, and can be substituted at the terminal
        carbon by hydroxy, alkoxy, alkanoyloxy, alkanoyloxyaryl, alkoxyalkanoyl,
        alkoxycarbonyl, or dialkylcarbamoyloxy; alkoxy; dialkylamino;
        alkanoyloxy; alkanoyloxyaryl; alkoxyalkanoyl; alkoxycarbonyl;
        dialkylcarbamoyloxy; or aryl, aryloxy, arylthio, or aralkyl, in which
        aryl can be substituted by alkyl, alkoxy, amino, hydroxy, halo, nito, or
        alkanoyloxy. These analogues can be administered, either alone or
        concurrently with known medications, to treat the above-described
        diseases.

L19  ANSWER 20 OF 20  USPATFULL on STN
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Full Text | Citing References

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AN      2001:182610  USPATFULL
TI      Pyridoxal analogues and methods of treatment
IN      Haque, Wasimul, Edmonton, Canada
PA      Medicure Inc., Winnipeg, Canada (non-U.S. corporation)
PI      US 2001031770       A1   20011018
        US 6890943          B2   20050510
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AI US 2001-863093 A1 20010522 (9)
RLI Division of Ser. No. US 2000-520194, filed on 7 Mar 2000, PENDING
PRAI US 1999-123698P 19990308 (60)
US 1999-125881P 19990324 (60)
DT Utility
FS APPLICATION
LREP Attention of Andrew J. Leon, MERCHANT & GOULD P.C., P.O. Box 2903, Minneapolis, MN, 55402-0903
CLMN Number of Claims: 108
ECL Exemplary Claim: 1
DRWN 4 Drawing Page(s)
LN.CNT 1356
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB **Pyridoxal** analogues can be useful for treating B_6 deficiency and related diseases; cardiovascular and related diseases; melanoma and related diseases; and symptoms thereof. One such analogue is a compound of the formula: ##STR1##

or a pharmaceutically acceptable acid addition salt thereof, in which R_1 is alkyl, alkenyl, in which alkyl or alkenyl can be interrupted by nitrogen, oxygen, or sulfur, and can be substituted at the terminal carbon by hydroxy, alkoxy, alkanoyloxy, alkanoyloxyaryl, alkoxyalkanoyl, alkoxycarbonyl, or dialkylcarbamoyloxy; alkoxy; dialkylamino; alkanoyloxy; alkanoyloxyaryl; alkoxyalkanoyl; alkoxycarbonyl; dialkylcarbamoyloxy; or aryl, aryloxy, arylthio, or aralkyl, in which aryl can be substituted by alky, alkoxy, amino, hydroxy, halo, nito, or alkanoyloxy. These analogues can be administered, either alone or concurrently with known medications, to treat the above-described diseases.

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(FILE 'HOME' ENTERED AT 18:08:56 ON 14 SEP 2005)

FILE 'CA, USPATFULL, BIOSIS, MEDLINE' ENTERED AT 18:09:35 ON 14 SEP 2005

```
L1      19365 S VITAMIN B6
L2      34946 S (PYRIDOXAMINE OR PYRIDOXAL############)
L3      87342 S (VERAPAMIL OR AMLODIPINE OR DILTIAZEM)
L4        301 S L2 AND L3
L5        141 S L4 AND HYPERTROPHY
L6          1 S L1 AND L5
L7        794 S L2 AND ((VITAMIN E) OR (VITAMIN C))
L8         58 S L7 AND HYPERTROPHY
L9        251 S L2 AND (ATENOLOL OR METOPROLOL OR PROPANOLOL)
L10       145 S L9 AND HYPERTROPHY
L11       182 S L10 OR L8 OR L5
L12       182 DUP REMOVE L11 (0 DUPLICATES REMOVED)
L13         8 S L12 AND VITAMIN B6
L14       138 S L12 AND (CONGESTIVE(6A)HEART)
L15         1 S L14 AND L1
L16        13 S L14 AND HOMOCYSTEINE
L17         3 S L14 AND MICROVASCULATURE
L18        20 S L17 OR L16 OR L15 OR L13 OR L6
L19        20 DUP REMOVE L18 (0 DUPLICATES REMOVED)
L20        25 S L14 AND VASODILATOR
L21        38 S L19 OR L20
L22        18 S L21 NOT L19
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=> **d l22 1-88 bib,ab**

L22 ANSWER 1 OF 18 USPATFULL on STN

Full Text | Citing References

AN 2004:240262 USPATFULL
TI Novel heteroaryl phosphonates as cardioprotective agents
IN Diakur, James, Winnipeg, CANADA
Haque, Wasimul, Edmonton, CANADA
Zhang, Wenlian, Winnipeg, CANADA
Yao, Junzhi, Winnipeg, CANADA
Pham, Vinh, Winnipeg, CANADA
PA Medicure International Inc., St. James, BARBADOS (non-U.S. corporation)
PI US 2004186077 A1 20040923
AI US 2003-391056 A1 20030317 (10)
DT Utility
FS APPLICATION
LREP MERCHANT & GOULD PC, P.O. BOX 2903, MINNEAPOLIS, MN, 55402-0903
CLMN Number of Claims: 44
ECL Exemplary Claim: 1
DRWN 2 Drawing Page(s)
LN.CNT 1481
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention teaches compound of general formula: ##STR1##

Wherein:

R_1 is selected from H and CH_3, and R_2 is selected from H and OH, or R_1 and R_2 together form an optionally substituted phenyl ring which is fused to the pyridine ring; and

R_3 is selected from H, CH_3, CH_{2OH} and ##STR2##

R_4 is selected from H, CH_3, CH_{2OH}, ##STR3##

R_5 is selected from H, phenyl, halogen-substituted phenyl and ##STR4##

Wherein R_6 and R_7 are each independently selected from H, Na+, K+, alkyl and optionally substituted aryl, and X and Y are each independently selected from H, OH and F, or at least one of X and Y is an heteroatom and together with R_3 forms a bridge with the proviso that R_4 is ##STR5##

and N-oxides thereof, and biologically acceptable salts thereof, related compounds, related pharmaceutical compositions, and methods for treating various disorders using such compositions.

L22 ANSWER 2 OF 18 USPATFULL on STN

Full Text | Citing References

AN 2004:221817 USPATFULL
TI Cardioprotective phosphonates and malonates
IN Haque, Wasimul, Edmonton, CANADA
PI US 2004171588 A1 20040902
AI US 2003-732037 A1 20031209 (10)
RLI Continuation-in-part of Ser. No. US 2002-282325, filed on 28 Oct 2002, PENDING Division of Ser. No. US 2001-795689, filed on 28 Feb 2001, GRANTED, Pat. No. US 6605612
PRAI US 2000-185899P 20000229 (60)

DT Utility
FS APPLICATION
LREP Merchant & Gould P.C., P.O. Box 2903, Minneapolis, MN, 55402-0903
CLMN Number of Claims: 23
ECL Exemplary Claim: 1
DRWN 2 Drawing Page(s)
LN.CNT 1690
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides for pyridoxine phosphonate analogues, pharmaceutical compositions, and methods for treatment of cardiovascular and related diseases.

L22 ANSWER 3 OF 18 USPATFULL on STN

Full Text | Citing References

AN 2004:51514 USPATFULL
TI Treatment of cardiovascular and related pathologies
IN Sethi, Rajat, Winnipeg, CANADA
Haque, Wasimul, Edmonton, CANADA
PA Medicure International Inc. (non-U.S. corporation)
PI US 2004038945 A1 20040226
AI US 2003-639948 A1 20030812 (10)
RLI Division of Ser. No. US 2000-645237, filed on 24 Aug 2000, PENDING
PRAI US 1999-150415P 19990824 (60)
DT Utility
FS APPLICATION
LREP MERCHANT & GOULD PC, P.O. BOX 2903, MINNEAPOLIS, MN, 55402-0903
CLMN Number of Claims: 8
ECL Exemplary Claim: 1
DRWN 34 Drawing Page(s)
LN.CNT 1172
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods for treating cardiovascular and related diseases such as **hypertrophy** are described. The methods are directed to concurrently administering a compound such as **pyridoxal**-5'-phosphate, **pyridoxamine**, **pyridoxal**, or a 3-acylated **pyridoxal** analogue with a therapeutic cardiovascular compound.

L22 ANSWER 4 OF 18 USPATFULL on STN

Full Text | Citing References

AN 2004:45000 USPATFULL
TI Treatment of cardiovascular and related pathologies
IN Sethi, Rajat, Winnipeg, CANADA
Haque, Wasimul, Edmonton, CANADA
PA Medicure International Inc. (non-U.S. corporation)
PI US 2004033993 A1 20040219
AI US 2003-639955 A1 20030812 (10)
RLI Division of Ser. No. US 2000-645237, filed on 24 Aug 2000, PENDING
PRAI US 1999-150415P 19990824 (60)
DT Utility
FS APPLICATION
LREP Attention of Anna M. Nelson, MERCHANT & GOULD P.C., P.O. Box 2903, Minneapolis, MN, 55402-0903
CLMN Number of Claims: 30
ECL Exemplary Claim: 1
DRWN 34 Drawing Page(s)
LN.CNT 1272
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods for treating cardiovascular and related diseases such as

ischemia, ischemia reperfusion injuries, and myocardial ischemia, are described. The methods are directed to concurrently administering a compound such as **pyridoxal**-5'-phosphate, **pyridoxamine**, **pyridoxal**, or a 3-acylated **pyridoxal** analogue with a therapeutic cardiovascular compound.

L22 ANSWER 5 OF 18 USPATFULL on STN

Full Text | Citing References

AN 2004:44999 USPATFULL
TI Treatment of cardiovascular and related pathologies
IN Sethi, Rajat, Winnipeg, CANADA
Haque, Wasimul, Edmonton, CANADA
PA Medicure International Inc., West Indies, BARBADOS (non-U.S. corporation)
PI US 2004033992 A1 20040219
AI US 2003-639950 A1 20030812 (10)
RLI Division of Ser. No. US 2000-645237, filed on 24 Aug 2000, PENDING
PRAI US 1999-150415P 19990824 (60)
DT Utility
FS APPLICATION
LREP MERCHANT & GOULD PC, P.O. BOX 2903, MINNEAPOLIS, MN, 55402-0903
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN 34 Drawing Page(s)
LN.CNT 1178
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods for treating cardiovascular and related diseases such **congestive heart** failure are described. The methods are directed to concurrently administering a compound such as **pyridoxal**-5'-phosphate, **pyridoxamine**, **pyridoxal**, or a 3-acylated **pyridoxal** analogue with a therapeutic cardiovascular compound.

L22 ANSWER 6 OF 18 USPATFULL on STN

Full Text | Citing References

AN 2004:44998 USPATFULL
TI Treating of cardiovascular and related pathologies
IN Sethi, Rajat, Winnipeg, CANADA
Haque, Wasimul, Edmonton, CANADA
PA Medicure International Inc. (non-U.S. corporation)
PI US 2004033991 A1 20040219
AI US 2003-639949 A1 20030812 (10)
RLI Division of Ser. No. US 2000-645237, filed on 24 Aug 2000, PENDING
PRAI US 1999-150415P 19990824 (60)
DT Utility
FS APPLICATION
LREP MERCHANT & GOULD PC, P.O. BOX 2903, MINNEAPOLIS, MN, 55402-0903
CLMN Number of Claims: 6
ECL Exemplary Claim: 1
DRWN 34 Drawing Page(s)
LN.CNT 1167
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods for treating cardiovascular and related diseases such as blood clots are described. The methods are directed to concurrently administering a compound such as **pyridoxal**-5'-phosphate, **pyridoxamine**, **pyridoxal**, or a 3-acylated **pyridoxal** analogue with a therapeutic cardiovascular compound.

L22 ANSWER 7 OF 18 USPATFULL on STN

Full Text | Citing References

AN 2004:44997 USPATFULL
TI Treatment of cardiovascular and related pathologies
IN Sethi, Rajat, Winnipeg, CANADA
Haque, Wasimul, Edmonton, CANADA
PA Medicure International Inc. (non-U.S. corporation)
PI US 2004033990 A1 20040219
AI US 2003-639877 A1 20030812 (10)
RLI Division of Ser. No. US 2000-645237, filed on 24 Aug 2000, PENDING
PRAI US 1999-150415P 19990824 (60)
DT Utility
FS APPLICATION
LREP MERCHANT & GOULD PC, P.O. BOX 2903, MINNEAPOLIS, MN, 55402-0903
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN 34 Drawing Page(s)
LN.CNT 1179
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods for treating cardiovascular and related diseases such as myocardial infarction are described. The methods are directed to concurrently administering a compound such as **pyridoxal**-5'-phosphate, **pyridoxamine**, **pyridoxal**, or a 3-acylated **pyridoxal** analogue with a therapeutic cardiovascular compound.

L22 ANSWER 8 OF 18 USPATFULL on STN

Full Text | Citing References

AN 2004:44996 USPATFULL
TI Treatment of cardiovascular and related pathologies
IN Sethi, Rajat, Winnipeg, CANADA
Haque, Wasimul, Edmonton, CANADA
PA Medicure International Inc. (non-U.S. corporation)
PI US 2004033989 A1 20040219
AI US 2003-639876 A1 20030812 (10)
RLI Division of Ser. No. US 2000-645237, filed on 24 Aug 2000, PENDING
PRAI US 1999-150415P 19990824 (60)
DT Utility
FS APPLICATION
LREP MERCHANT & GOULD PC, P.O. BOX 2903, MINNEAPOLIS, MN, 55402-0903
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN 34 Drawing Page(s)
LN.CNT 1169
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods for treating cardiovascular and related diseases such as arrhythmia are described. The methods are directed to concurrently administering a compound such as **pyridoxal**-5'-phosphate, **pyridoxamine**, **pyridoxal**, or a 3-acylated **pyridoxal** analogue with a therapeutic cardiovascular compound.

L22 ANSWER 9 OF 18 USPATFULL on STN

Full Text | Citing References

AN 2004:9618 USPATFULL
TI Treatment of cardiovascular and related pathologies
IN Sethi, Rajat, Winnipeg, CANADA
Haque, Wasimul, Edmonton, CANADA
PA Medicure International Inc., Barbados, CAYMAN ISLANDS (non-U.S. corporation)

PI US 6677356 B1 20040113
AI US 2000-645237 20000824 (9)
PRAI US 1999-150415P 19990824 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Jones, Dwayne C.
LREP Merchant & Gould P.C.
CLMN Number of Claims: 36
ECL Exemplary Claim: 1
DRWN 34 Drawing Figure(s); 34 Drawing Page(s)
LN.CNT 1398
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods for treating cardiovascular and related diseases such as **hypertrophy**, hypertension, **congestive heart** failure, ischemia, ischemia reperfusion injuries in various organs, arrhythmia, and myocardial infarction, are described. The methods are directed to concurrently administering a compound such as **pyridoxal**-5'-phosphate, **pyridoxamine**, **pyridoxal**, or a 3-acylated **pyridoxal** analogue with a therapeutic cardiovascular compound.

L22 ANSWER 10 OF 18 USPATFULL on STN

Full Text | Citing References

AN 2003:319260 USPATFULL
TI 28 human secreted proteins
IN Rosen, Craig A., Laytonsville, MD, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES
Li, Yi, Sunnyvale, CA, UNITED STATES
Zeng, ZhiZhen, Landsdale, PA, UNITED STATES
Kyaw, Hla, Frederick, MD, UNITED STATES
Fischer, Carrie L., Burke, VA, UNITED STATES
Li, Haodong, Gaithersburg, MD, UNITED STATES
Soppet, Daniel R., Centreville, VA, UNITED STATES
Gentz, Reiner L., Rockville, MD, UNITED STATES
Wei, Ying-Fei, Berkeley, CA, UNITED STATES
Moore, Paul A., Germantown, MD, UNITED STATES
Young, Paul E., Gaithersburg, MD, UNITED STATES
Greene, John M., Gaithersburg, MD, UNITED STATES
Ferrie, Ann M., Painted Post, NY, UNITED STATES
Hastings, Gregg A., Westlake Village, CA, UNITED STATES
PI US 2003225009 A1 20031204
AI US 2002-58993 A1 20020130 (10)
RLI Continuation-in-part of Ser. No. US 2001-852659, filed on 11 May 2001, PENDING Continuation-in-part of Ser. No. US 1998-152060, filed on 11 Sep 1998, GRANTED, Pat. No. US 6448230 Continuation-in-part of Ser. No. US 2001-852797, filed on 11 May 2001, PENDING Continuation-in-part of Ser. No. US 1998-152060, filed on 11 Sep 1998, GRANTED, Pat. No. US 6448230 Continuation-in-part of Ser. No. US 2001-853161, filed on 11 May 2001, PENDING Continuation-in-part of Ser. No. US 1998-152060, filed on 11 Sep 1998, GRANTED, Pat. No. US 6448230 Continuation-in-part of Ser. No. WO 1998-US4858, filed on 12 Mar 1998, PENDING
PRAI US 2001-265583P 20010202 (60)
US 2001-265583P 20010202 (60)
US 2001-265583P 20010202 (60)
US 2001-265583P 20010202 (60)
US 1997-40762P 19970314 (60)
US 1997-40710P 19970314 (60)
US 1997-50934P 19970530 (60)
US 1997-48100P 19970530 (60)
US 1997-48357P 19970530 (60)

US 1997-48189P 19970530 (60)
US 1997-57765P 19970905 (60)
US 1997-48970P 19970606 (60)
US 1997-68368P 19971219 (60)
DT Utility
FS APPLICATION
LREP HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
CLMN Number of Claims: 23
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 29452
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to novel human secreted proteins and isolated nucleic acids containing the coding regions of the genes encoding such proteins. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human secreted proteins. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating diseases, disorders, and/or conditions related to these novel human secreted proteins.

L22 ANSWER 11 OF 18 USPATFULL on STN

Full Text | Citing References

AN 2003:258369 USPATFULL
TI Cardioprotective phosphonates and malonates
IN Haque, Wasimul, Edmonton, CANADA
PA Medicure International Inc., St. James, BARBADOS (non-U.S. corporation)
PI US 2003181422 A1 20030925
US 6867215 B2 20050315
AI US 2003-377507 A1 20030228 (10)
RLI Continuation of Ser. No. US 2001-795689, filed on 28 Feb 2001, PENDING
PRAI US 2000-185899P 20000229 (60)
DT Utility
FS APPLICATION
LREP MERCHANT & GOULD P.C., Attention: Anna M. Nelson, P.O. Box 2903, Minneapolis, MN, 55402-0903
CLMN Number of Claims: 58
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1543
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides for pyridoxine phosphonate analogues such as, for example, ((2-methyl-3-hydroxy-4-hydroxymethyl-5-pyridyl)alkylphosphonates, and (2-methyl-3-hydroxy-4-hydroxymethyl-5-pyridyl)azaalkylphosphonates) and to pyridoxine malonate analogues, such as, for example, ((2-methyl-3-hydroxy-4-hydroxymethyl-5-pyridylmethyl)malonates), pharmaceutical compositions, and methods for treatment of cardiovascular and related diseases, and diabetes mellitus and related diseases.

L22 ANSWER 12 OF 18 USPATFULL on STN

Full Text | Citing References

AN 2003:174226 USPATFULL
TI Cardioprotective phosphonates and malonates
IN Haque, Wasimul, Edmonton, CANADA
PA Medicure International Inc., St. James, BARBADOS (non-U.S. corporation)
PI US 2003120074 A1 20030626
US 6780997 B2 20040824
AI US 2002-282328 A1 20021028 (10)

RLI Division of Ser. No. US 2001-795689, filed on 28 Feb 2001, PENDING
PRAI US 2000-185899P 20000229 (60)
DT Utility
FS APPLICATION
LREP MERCHANT & GOULD PC, P.O. BOX 2903, MINNEAPOLIS, MN, 55402-0903
CLMN Number of Claims: 239
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 2316
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides for pyridoxine phosphonate analogues such as, for example, ((2-methyl-3-hydroxy-4-hydroxymethyl-5-pyridyl)alkylphosphonates, and (2-methyl-3-hydroxy-4-hydroxymethyl-5-pyridyl)azaalkylphosphonates) and to pyridoxine malonate analogues, such as, for example, ((2-methyl-3-hydroxy-4-hydroxymethyl-5-pyridylmethyl)malonates), pharmaceutical compositions, and methods for treatment of cardiovascular and related diseases, and diabetes mellitus and related diseases.

L22 ANSWER 13 OF 18 USPATFULL on STN

Full Text | Citing References

AN 2003:166820 USPATFULL
TI Cardioprotective phosphonates and malonates
IN Haque, Wasimul, Edmonton, CANADA
PA Medicure International Inc., St. James, BARBADOS (non-U.S. corporation)
PI US 2003114678 A1 20030619
US 6667315 B2 20031223
AI US 2002-282326 A1 20021028 (10)
RLI Division of Ser. No. US 2001-795689, filed on 28 Feb 2001, PENDING
PRAI US 2000-185899P 20000229 (60)
DT Utility
FS APPLICATION
LREP MERCHANT & GOULD PC, P.O. BOX 2903, MINNEAPOLIS, MN, 55402-0903
CLMN Number of Claims: 239
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 2318
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides for pyridoxine phosphonate analogues such as, for example, ((2-methyl-3-hydroxy-4-hydroxymethyl-5-pyridyl)alkylphosphonates, and (2-methyl-3-hydroxy-4-hydroxymethyl-5-pyridyl)azaalkylphosphonates) and to pyridoxine malonate analogues, such as, for example, ((2-methyl-3-hydroxy-4-hydroxymethyl-5-pyridylmethyl)malonates), pharmaceutical compositions, and methods for treatment of cardiovascular and related diseases, and diabetes mellitus and related diseases.

L22 ANSWER 14 OF 18 USPATFULL on STN

Full Text | Citing References

AN 2003:166819 USPATFULL
TI Cardioprotective phosphonates and malonates
IN Haque, Wasimul, Edmonton, CANADA
PA Medicure International Inc., St. James, BARBADOS (non-U.S. corporation)
PI US 2003114677 A1 20030619
AI US 2002-282325 A1 20021028 (10)
RLI Division of Ser. No. US 2001-795689, filed on 28 Feb 2001, PENDING
PRAI US 2000-185899P 20000229 (60)
DT Utility

FS APPLICATION
LREP MERCHANT & GOULD PC, P.O. BOX 2903, MINNEAPOLIS, MN, 55402-0903
CLMN Number of Claims: 239
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 2315
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides for pyridoxine phosphonate analogues such as, for example, ((2-methyl-3-hydroxy-4-hydroxymethyl-5-pyridyl)alkylphosphonates, and (2-methyl-3-hydroxy-4-hydroxymethyl-5-pyridyl)azaalkylphosphonates) and to pyridoxine malonate analogues, such as, for example, ((2-methyl-3-hydroxy-4-hydroxymethyl-5-pyridylmethyl)malonates), pharmaceutical compositions, and methods for treatment of cardiovascular and related diseases, and diabetes mellitus and related diseases.

L22 ANSWER 15 OF 18 USPATFULL on STN

Full Text | Citing References

AN 2002:307870 USPATFULL
TI 28 human secreted proteins
IN Ruben, Steven M., Olney, MD, UNITED STATES
Rosen, Craig A., Laytonsville, MD, UNITED STATES
Li, Yi, Sunnyvale, CA, UNITED STATES
Zeng, Zhizhen, Lansdale, PA, UNITED STATES
Kyaw, Hla, Frederick, MD, UNITED STATES
Fischer, Carrie L., Burke, VA, UNITED STATES
Li, Haodong, Gaithersburg, MD, UNITED STATES
Soppet, Daniel R., Centreville, VA, UNITED STATES
Gentz, Reiner L., Rockville, MD, UNITED STATES
Wei, Ying-Fei, Berkeley, CA, UNITED STATES
Moore, Paul A., Germantown, MD, UNITED STATES
Young, Paul E., Gaithersburg, MD, UNITED STATES
Greene, John M., Gaithersburg, MD, UNITED STATES
Ferrie, Ann M., Tewksbury, MA, UNITED STATES
PI US 2002172994 A1 20021121
US 6878806 B2 20050412
AI US 2001-852797 A1 20010511 (9)
RLI Continuation-in-part of Ser. No. US 1998-152060, filed on 11 Sep 1998, PENDING Continuation-in-part of Ser. No. WO 1998-US4858, filed on 12 Mar 1998, UNKNOWN
PRAI US 2001-265583P 20010202 (60)
US 1997-40762P 19970314 (60)
US 1997-40710P 19970314 (60)
US 1997-50934P 19970530 (60)
US 1997-48100P 19970530 (60)
US 1997-48357P 19970530 (60)
US 1997-48189P 19970530 (60)
US 1997-57765P 19970905 (60)
US 1997-48970P 19970606 (60)
US 1997-68368P 19971219 (60)
DT Utility
FS APPLICATION
LREP HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
CLMN Number of Claims: 23
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 17794
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to novel human secreted proteins and

isolated nucleic acids containing the coding regions of the genes encoding such proteins. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human secreted proteins. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating diseases, disorders, and/or conditions related to these novel human secreted proteins.

L22 ANSWER 16 OF 18 USPATFULL on STN

Full Text | Citing References

AN 2002:149131 USPATFULL
TI 28 human secreted proteins
IN Ruben, Steven M., Olney, MD, UNITED STATES
Rosen, Craig A., Laytonsville, MD, UNITED STATES
Li, Yi, Sunnyvale, CA, UNITED STATES
Zeng, Zhizhen, Lansdale, PA, UNITED STATES
Kyaw, Hla, Frederick, MD, UNITED STATES
Fischer, Carrie L., Burke, VA, UNITED STATES
Li, Haodong, Gaithersburg, MD, UNITED STATES
Soppet, Daniel R., Centreville, VA, UNITED STATES
Gentz, Reiner L., Rockville, MD, UNITED STATES
Wei, Ying-Fei, Berkeley, CA, UNITED STATES
Moore, Paul A., Germantown, MD, UNITED STATES
Young, Paul E., Gaithersburg, MD, UNITED STATES
Greene, John M., Gaithersburg, MD, UNITED STATES
Ferrie, Ann M., Tewksbury, MA, UNITED STATES
PI US 2002077287 A1 20020620
AI US 2001-852659 A1 20010511 (9)
RLI Continuation-in-part of Ser. No. US 1998-152060, filed on 11 Sep 1998, UNKNOWN
DT Utility
FS APPLICATION
LREP HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
CLMN Number of Claims: 23
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 17779
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to novel human secreted proteins and isolated nucleic acids containing the coding regions of the genes encoding such proteins. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human secreted proteins. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating diseases, disorders, and/or conditions related to these novel human secreted proteins.

L22 ANSWER 17 OF 18 USPATFULL on STN

Full Text | Citing References

AN 2002:148614 USPATFULL
TI 28 human secreted proteins
IN Ruben, Steven M., Olney, MD, UNITED STATES
Rosen, Craig A., Laytonsville, MD, UNITED STATES
Li, Yi, Sunnyvale, CA, UNITED STATES
Zeng, ZhiZhen, Lansdale, PA, UNITED STATES
Kyaw, Hla, Frederick, MD, UNITED STATES
Fischer, Carrie L., Burke, VA, UNITED STATES
Li, Haodong, Gaithersburg, MD, UNITED STATES
Soppet, Daniel R., Centreville, VA, UNITED STATES
Gentz, Reiner L., Rockville, MD, UNITED STATES

Wei, Ying-Fei, Berkeley, CA, UNITED STATES
Moore, Paul A., Germantown, MD, UNITED STATES
Young, Paul E., Gaithersburg, MD, UNITED STATES
Greene, John M., Gaithersburg, MD, UNITED STATES
Ferrie, Ann M., Painted Post, NY, UNITED STATES

PI US 2002076756 A1 20020620
US 6919433 B2 20050719
AI US 2001-853161 A1 20010511 (9)
PRAI US 2001-265583P 20010202 (60)
DT Utility
FS APPLICATION
LREP HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
CLMN Number of Claims: 23
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 17788
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to novel human secreted proteins and isolated nucleic acids containing the coding regions of the genes encoding such proteins. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human secreted proteins. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating diseases, disorders, and/or conditions related to these novel human secreted proteins.

L22 ANSWER 18 OF 18 USPATFULL on STN

Full Text | Citing References

AN 2002:17278 USPATFULL
TI Cardioprotective phosphonates and malonates
IN Haque, Wasimul, Edmonton, CANADA
PI US 2002010158 A1 20020124
US 6605612 B2 20030812
AI US 2001-795689 A1 20010228 (9)
PRAI US 2000-185899P 20000229 (60)
DT Utility
FS APPLICATION
LREP MERCHANT & GOULD PC, P.O. BOX 2903, MINNEAPOLIS, MN, 55402-0903
CLMN Number of Claims: 239
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 2237
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides for pyridoxine phosphonate analogues such as, for example, ((2-methyl-3-hydroxy-4-hydroxymethyl-5-pyridyl)alkylphosphonates, and (2-methyl-3-hydroxy-4-hydroxymethyl-5-pyridyl)azaalkylphosphonates) and to pyridoxine malonate analogues, such as, for example, ((2-methyl-3-hydroxy-4-hydroxymethyl-5-pyridylmethyl)malonates), pharmaceutical compositions, and methods for treatment of cardiovascular and related diseases, and diabetes mellitus and related diseases.

=>

edema, and pulmonary edema. β-Adrenergic receptor antagonists and diuretics have been associated with incompatibility with nonsteroidal anti-inflammatory drugs in addition to impotence, gout, and muscle cramps in the case of diuretics and in addition to a decrease in left ventricular function and sudden withdrawal syndrome in the case of β-adrenergic receptor antagonists. Moreover, side effects associated with α-adrenergic receptor antagonists include thostatic hypotension, and side effects associated with antithrombolytic agents include excessive bleeding.

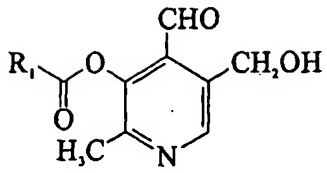
[0009] To address the side effects, the dosage of a drug may be reduced or the administration of the drug may be abated and replaced with another drug. It would be desirable to administer a drug therapy with decreased amounts of the active ingredient to reduce side effects but maintain effectiveness.

SUMMARY OF THE INVENTION

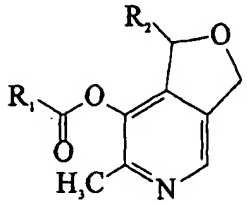
[0010] The present invention provides methods for treating cardiovascular and related diseases, such as, for example, hypertrophy, hypertension, congestive heart failure, myocardial ischemia, ischemia reperfusion injuries in an organ, arrhythmia, and myocardial infarction. One embodiment is directed to a method of treating cardiovascular disease in a mammal by concurrently administering to the mammal a therapeutically effective amount of a combination of a compound suitable for use in methods of the invention and a therapeutic cardiovascular compound. Therapeutic cardiovascular compounds suitable for use in methods of the invention include an angiotensin converting enzyme inhibitor, an angiotensin II receptor antagonist, a calcium channel blocker, an antithrombolytic agent, a β-adrenergic receptor antagonist, a vasodilator, a diuretic, an α-adrenergic receptor antagonist, an antioxidant, and a mixture thereof. In some embodiments, the therapeutic cardiovascular compound is PPADS.

[0011] Compounds suitable for use in the methods of the invention include pyridoxal-5'-phosphate, pyridoxamine, pyridoxal, 3-acylated pyridoxal analogues, pharmaceutically acceptable acid addition salts thereof, and mixtures thereof.

[0012] In one embodiment, a 3-acylated pyridoxal analogue is a compound of the formula



[0013] In another embodiment, a 3-acylated pyridoxal analogue is a compound of the formula



BRIEF DESCRIPTION OF THE FIGURES

[0014] Figure 1 is a graph showing the effect of P-5-P and aspirin, alone or in combination, on mortality in the rat model of coronary ligation.

[0015] Figure 2 is a graph showing the effect of P-5-P and captopril, alone or in combination, on mortality in the rat model of coronary ligation.

[0016] Figure 3 is a graph showing the effect of P-5-P and propranolol, alone or in combination, on mortality in the rat model of coronary ligation.

[0017] Figure 4 is a graph showing the effect of P-5-P and verapamil, alone or in combination, on mortality in the rat model of coronary ligation.

[0018] Figure 5 is a graph showing the effect of P-5-P and aspirin, alone or in combination, on scar weight in the rat model of coronary ligation.

[0019] Figure 6 is a graph showing the effect of P-5-P and captopril, alone or in combination, on scar weight in the rat model of coronary ligation.

[0020] Figure 7 is a graph showing the effect of P-5-P and propranolol, alone or in combination, on scar weight in the rat model of coronary ligation.

[0021] Figure 8 is a graph showing the effect of P-5-P and verapamil, alone or in combination, on scar weight in the rat model of coronary ligation.

[0022] Figure 9 is a graph showing the effect of P-5-P and aspirin, alone or in combination, on the rate of force of contraction (+dp/dt) in the rat model of coronary ligation.

[0023] Figure 10 is a graph showing the effect of P-5-P and captopril, alone or in combination, on the rate of force of contraction (+dp/dt) in the rat model of coronary ligation.

[0024] Figure 11 is a graph showing the effect of P-5-P and propranolol, alone or in combination, on the rate of force of contraction (+dp/dt) in the rat model of coronary ligation.

[0025] Figure 12 is a graph showing the effect of P-5-P verapamil, alone or in combination, on the rate of force of contraction (+dp/dt) in the rat model of coronary ligation.

[0026] Figure 13 is a graph showing the effect of P-5-P and aspirin, alone or in combination, on the rate of force of relaxation (-dp/dt) in the rat model of coronary ligation.

[0027] Figure 14 is a graph showing the effect of P-5-P and captopril, alone or in combination, on the rate of force of relaxation (-dp/dt) in the rat model of coroary ligation.

[0028] Figure 15 is a graph showing the effect of P-5-P and propranolol, alone or in combination, on the rate of force of relaxation (-dp/dt) in the rat model of coronary ligation.

[0029] Figure 16 is a graph showing the effect of P-5-P and verapamil, alone or in combination, on the rate of force of relaxation (-dp/dt) in the rat model of coronary ligation.

[0030] Figure 17 is a graph showing the effect of P-5-P and aspirin, alone or in combination, on left ventricular end diastolic pressure (LVEDP) in the rat model of coronary ligation.

[0031] Figure 18 is a graph showing the effect of P-5-P and captopril, alone or in combination, on left ventricular end diastolic pressure (LVEDP) in the rat model of coronary ligation.

[0032] Figure 19 is a graph showing the effect of P-5-P and propranolol, alone or in combination, on left ventricular end diastolic pressure (LVEDP) in the rat model of coronary ligation.

[0033] Figure 20 is a graph showing the effect of P-5-P and verapamil, alone or in combination, on left ventricular end diastolic pressure (LVEDP) in the rat model of coronary ligation.

[0034] Figure 21 is a graph showing the effect of P-5-P and aspirin, alone or in combination, on heart weight in the rat model of coronary ligation.

[0035] Figure 22 is a graph showing the effect of P-5-P and captopril, alone or in combination, on heart weight in the rat model of coronary ligation.

[0036] Figure 23 is a graph showing the effect of P-5-P propranolol, alone or in combination, on heart weight in the rat model of coronary ligation.

[0037] Figure 24 is a graph showing the effect of P-5-P and verapamil, alone or in combination, on heart weight in the rat model of coronary ligation.

[0038] Figure 25 is a graph showing the effect of P-5-P and aspirin, alone or in combination, on right ventricular weight in the rat model of coronary ligation.

[0039] Figure 26 is a graph showing the effect of P-5-P and captopril, alone or in combination, on right ventricular weight in the rat model of coronary ligation.

[0040] Figure 27 is a graph showing the effect of P-5-P and propranolol, alone or in combination, on right ventricular weight in the rat model of coronary ligation.

[0041] Figure 28 is a graph showing the effect of P-5-P and verapamil, alone or in combination, on right ventricular weight in the rat model of coronary ligation.

[0042] Figure 29A is a graph showing systolic blood pressure in rats from all pretreatment experiment groups at "0" day. "C" designates a control group; "S" designates a sucrose diet induced diabetic group; "M" designates a group administered P-5-P alone; "Ca" designates a group administered captopril alone; "V" designates a group administered verapamil alone; "M+Ca" designates a group administered P-5-P and captopril; "M+V" designates a group administered P-5-P and verapamil.

[0043] Figure 29B is a graph showing the effect of pretreatment with P-5-P, captopril and verapamil on systolic blood pressure in rats when administered 1 week prior to sucrose diet induced diabetes. "C", "S", "M", "Ca", "V", "M+Ca", and "M+V" are designated as in Figure 29A.

[0044] Figure 30A is a graph showing systolic blood pressure in rats from all experiment groups involved in same day treatment as sucrose feeding at "0" day. "C", "S", "M", "Ca", "V", "M+Ca", and "M+V" are designated as in Figure 29A.

[0045] Figure 30B is a graph showing the effect of administration of P-5-P, captopril and verapamil on systolic blood pressure in rats when administered the same day as sucrose feeding to induce diabetes. "C", "S", "M", "Ca", "V", "M+Ca", and "M+V" are designated as in Figure 29A.

[0046] Figure 31A is a graph showing systolic blood pressure in rats from all experiment groups involved in treatment two weeks after sucrose feeding at "0" day. "C", "S", "M", "Ca", "V", "M+Ca", and "M+V" are designated as in Figure 29A.

[0047] Figure 31B is a showing systolic blood pressure in rats from all experiment groups involved in treatment two weeks after sucrose feeding at "0" day. "C", "S", "M", "Ca", "V", "M+Ca", and "M+V" are designated as in Figure 29A.

DESCRIPTION OF THE INVENTION

[0048] The present invention provides methods for treatment of cardiovascular and related diseases or conditions. Such cardiovascular and related diseases include hypertrophy, hypertension, congestive heart failure, ischemia, such as myocardial ischemia, ischemia reperfusion injury, arrhythmia, and myocardial infarction.

[0049] In accordance with the present invention, it has been found that pyridoxal-5'-phosphate and its derivatives can be used concurrently with therapeutic cardiovascular compounds in the treatment of the above-identified diseases and conditions. "Treatment" and "treating" as used herein include preventing, inhibiting, and alleviating cardiovascular diseases, related diseases, and related symptoms as well as healing the ischemia-related conditions or symptoms thereof affecting mammalian organs and tissues. Treatment may be carried out by concurrently administering a therapeutically effective amount of a combination of a compound suitable for use in methods of the invention and a therapeutic cardiovascular compound.

[0050] A "therapeutically effective amount" as used herein includes a prophylactic amount, for example, an amount effective for preventing or protecting against cardiovascular diseases, related diseases, and symptoms thereof, and amounts effective for alleviating or healing cardiovascular diseases, related diseases, and symptoms thereof. By administering a compound suitable for use in methods of the invention concurrently with a therapeutic cardiovascular compound, the therapeutic cardiovascular compound may be administered in a dosage amount that is less than the dosage amount required when the therapeutic cardiovascular compound is administered as a sole active ingredient. By administering lower dosage amounts of the active ingredient, the side effects associated therewith should accordingly be reduced.

[0125] The purified solid was analyzed according to Example 2, and the purity was confirmed according to Example 1.

Example 9: In Vitro - Ischemia Reperfusion in Isolated Rat Hearts and Measurement of Left Ventricular Developed Pressure (LVDP)

[0126] Male Sprague-Dawley rats weighing 250-300g are anaesthetized with a mixture of ketamine (60 mg/kg) and xylazine (10 mg/kg). The hearts are rapidly excised, cannulated to a Langendorff apparatus and perfused with Krebs-Henseleit-solution, gassed with a mixture of 95% O2 and 5% CO2, pH 7.4. The perfusate contained (in mM): 120 NaCl, 25 NaHCO3, 11 glucose, 4.7 KCl, 1.2 KH2PO4, 1.2 MgSO4 and 1.25 CaCl2.

[0127] The hearts are electrically stimulated at a rate of 300 beats/min (Phipps and Bird Inc., Richmond, VA) and a water-filled latex balloon is inserted in the left ventricle and connected to a pressure transducer (Model 1050BP; BYOPAC SYSTEM INC., Goleta, California) for the left ventricular systolic measurements. The left ventricular end diastolic pressure (LVEDP) is adjusted at 10 mmHg at the beginning of the experiment. In some experiments the left ventricular pressures are differentiated to estimate the rate of ventricular contraction (+dP/dt) and rate of ventricular relaxation (-dP/dt) using the Acknowledge 3.03 software for Windows (BIOPAC SYSTEM INC.,) Goleta, California). All hearts are stabilized for a period of 30 min and then randomly distributed into nine different experimental groups (n= 5-8 per group). The experimental groups are defined as follows:

1) Control group (control hearts are further perfused for 90 minutes for a total of 130 min of continous perfusion);
2) Ischemia reperfusion group (Ischemia reperfusion hearts are made globally ischemic by stopping the coronary flow completely for 30 min and then the hearts are reperfused for 60 min);
3) P-5-P (15 uM) treated group;
4) captopril (100 uM) treated group;
5) verapamil (0.01 uM)) treated group;
6) propranolol (3mM) treated group;
7) PPADS (10 uM) treated group;

8) P-5-P + captopril treated group;

9) P-5-P + verapamil treated group;

10) P-5-P + propranolol treated group;

11) P-5-P + PPADS treated group.

[0128] Drug treatment is started 10 min before global ischemia followed by 30 min global ischemia and 60 min reperfusion. At the end of some experiments, the hearts are quickly freeze-clamped with a liquid nitrogen precooled Wollenberger tong. Rats are housed in clear cages in a temperature and humidity controlled room on a 12 hr light-dark cycle. Food and water are supplied *ad libitum*.

[0129] Hearts subject to 30 min of ischemia followed by 60 min of reperfusion showed slight recovery in the contractile function as represented by 29.5% recovery in LVDP (left ventricular developed pressure). As compared to the untreated group, treatment with P-5-P, captopril, or P-5-P and captopril showed better recoveries in LVDP by 78.2%, 61.4%, and 132% respectively (Table I).

Table I

Effect of Pyridoxal-5-phosphate (P-5-P, 15uM) and Captopril (100uM) on % recovery of left ventricular systolic pressure (LVDP).

Drugs	LVDP		LVEDP	LVSP	% recovery
	(B)	*(A)*	*mmHg*	*mmHg*	(LVDP)
Untreated	87±7	25±2.9	62±5.6	87±6.9	29.5±3.7
P5P	80±3.8	63±5	35±4.8	98±8.2	78.2 ± 3.3*
Captopril	78±10.9	47±8.6	54±6.7	101±14.6	61.4 ± 5.2*
P5P + Captopril	89±6.9	69±7.4	28±7.3	117±8.4	132 ± 7.5#

(A) =After ischemia, *(B)* =Before ischemia.

[0130] Hearts subject to 30 min of ischemia followed by 60 min of reperfusion showed slight recovery in the contractile function as represented by 29.5% recovery in LVDP. As compared to the untreated group, treatment with P-5-P, verapamil, or P-5-P and verapamil showed better recoveries in LVDP by 78.2%, 43%, and 109% respectively (Table II).

Table II

Effect of Pyridoxal-5-phosphate (P-5-P,15uM) and Verapamil (0.01uM) on % recovery of left ventricular systolic pressure (LVDP).

Drugs	LVDP		LVEDP	LVSP	% recovery
	(B)	*(A)*	*mmHg*	*mmHg*	(LVDP)
Untreated	87±7	25±2.9	62±5.6	87±6.9	29.5±3.7
P5P	80±3.8	63±5	35±4.8	98±8.2	78.2 ± 3.3*
Verapamil	54±9.1	23±4.5	55±5.1	78±7.7	43 ± 6.6
P5P + Verapamil	78±10.5	85±11.7	34±7.3	119±8	109 ± 4.6#

(A) =After ischemia, *(B)* =Before ischemia.

[0131] Hearts subject to 30 min of ischemia followed by 60 min of reperfusion showed slight recovery in the contractile function as represented by 29.5% recovery in LVDP. As compared to the untreated group, treatment with P-5-P, PPADS, or P-5-P and PPADS showed better recoveries in LVDP by 78.2%, 61%, and 128% respectively (Table III).

Table III

Effect of Pyridoxal-5-phosphate (P-5-P,15uM) and Pyridoxal phosphate 6-azophenyl-2'-4'disulfonic acid (PPADS 100uM) on % recovery of left ventricular systolic pressure (LVDP).

Drugs	LVDP		LVEDP	LVSP	% recovery
	(B)	*(A)*	*mmHg*	*mmHg*	(LVDP)
Untreated	87±7	25±2.9	62±5.6	87±6.9	29.5±3.7
P5P	80±3.8	63±5	35±4.8	98±8.2	78.2 ± 3.3*
PPADS	92±15.2	58±13.6	57±6.3	115±11.5	61 ± 4.8*
P5P + PPADS	82±15.8	105±22.8	34±3.1	139±21.6	128 ± 13.8#

(A) =After ischemia, *(B)* =Before ischemia.

[0132] Hearts subject to 30 min of ischemia followed by 60 min of reperfusion showed slight recovery in the contractile function as represented by 29.5% recovery in LVDP. As compared to the untreated group, treatment with P-5-P, propranolol, or P-5-P and propranolol showed better recoveries in LVDP by 78.2%, 74%, and 120% respectively (Table IV).

Table IV

Effect of Pyridoxal-5-phosphate (P-5-P,15uM) and Propranolol (3uM) on % recovery of left ventricular systolic pressure (LVDP).

Drugs	LVDP		LVEDP	LVSP	% recovery
	(B)	*(A)*	*mmHg*	*mmHg*	(LVDP)
Untreated	87±7	25±2.9	62±5.6	87±6.9	29.5±3.7
P5P	80±3.8	63±5	35±4.8	98±8.2	78.2 ± 3.3*
Propranolol	61±10.8	45±9.7	27±6.6	72±15.1	74 ± 4.9*
P5P + Propranolol	67±12.6	75±10.4	40±4.2	115±8.3	120 ± 15.5#

(A) =After ischemia, *(B)* =Before ischemia

[0133] Tables I-IV demonstrate that P-5-P in addition to providing significant benefit in ischemia reperfusion injury when given alone also improves or adds to the benefits associated with other commonly used drugs when given in combination with these drugs.

[0134] In addition to captopril, other angiotensin converting enzyme inhibitors, such as, for example, enalapril or imidapril, can similarly be administered in place of captopril. In addition to verapamil, other known calcium channel blockers, such as, for example, nifedipine or diltiazem, can similarly be administered in place of verapamil. In addition to propranolol, other β-adrenergic receptor antagonists such as, for example, atenolol, timolol, and metoprolol can similarly be administered in place of propranolol. Additionally, angiotensin II receptor antagonists such as, for example, losartan and valsartan can be used in the above example.

Example 10: In Vivo - Coronary Artery Ligation

[0135] Myocardial infarction is produced in male Sprague-Dawley rats (200-250 g) by occlusion of the left coronary artery as described in Sethi et al., J. Cardiac Failure, 1(5) (1995) and Sethi et al., Am. J. Physiol., 272 (1997).

[0136] Rats are anesthetized with 1-5% isoflurane in 100% 0_2 (2L flow rate). The skin is incised along the left sterna border and the 4th rib is cut proximal to the sternum and a retractor inserted. The pericardial sac is opened and the heart externalized. The left anterior descending

coronary artery is ligated approximately 2 mm from its origin on the aorta using a 6-0 silk suture. The heart is then repositioned in the chest and the incision closed via purse-string sutures.

[0137] Sham operated rats undergo identical treatment except that the artery is not ligated. Mortality due to surgery is less than 1%. Unless indicated in the text, the experimental animals showing infarct size >30% of the left ventricle are used in this study. All animals are allowed to recover, allowed to receive food and water ad libitum, and are maintained for a period of 21 days for Electrocardiogram (ECG), hemodynamic, and histological assessment.

[0138] Occlusion of the coronary artery in rats has been shown to produce myocardial cell damage which results in scar formation in the left ventricle and heart dysfunction. While the complete healing of the scar occurs within 3 weeks of the coronary occlusion, mild, moderate and severe stages of congestive heart failure have been reported to occur at 4, 8 and 16 weeks after ligation. Accordingly, the contractile dysfunction seen at 3 weeks after the coronary occlusion in rats is due to acute ischemic changes.

[0139] The rats are housed in clear cages in a temperature and humidity controlled room, on a 12 hour light-dark cycle. Food and water are supplied ad libitum. After surgery, rats are randomly assigned to treatment or non-treatment in both sham and experimental groups. Randomization of animals was performed and treatment begins 1 hour after coronary occlusion and continues for 21 days. The total duration of experiments in each case is 21 days. The groups are as follows:

1) sham operated;
2) coronary artery ligated (treatment with equal volumes of saline);
3) coronary artery ligated (treated with 10 mg/kg P-5-P);
4) coronary artery ligated (treated with 100 mg/kg captopril);
5) coronary artery ligated (treated with 50 mg/kg propranolol);
6) coronary artery ligated (treated with 100 mg/kg aspirin);
7) coronary artery ligated (treated with 25 mg/kg verapamil) ;
8) coronary artery ligated (treated with 10 mg/kg P-5-P + 100 mg/kg captopril);
9) coronary artery ligated (treated with 10 mg/kg P-5-P + 50 mg/kg propranolol);

10) coronary artery ligated (treated with 10 mg/kg P-5-P + 100 mg/kg aspirin);
11) coronary artery ligated (treated with 10 mg/kg P-5-P + 25 mg/kg verapamil).

[0140] P-5-P (10 mg/kg), captopril (100 mg/kg), propranolol (50 mg/kg), verapamil (25 mg/kg) and aspirin (100 mg/kg) were administered once daily by gastric tube.

[0141] Acute myocardial infarction resulted in a total mortality of 35% % in the untreated group of rats in 21 days. The highest mortality occurred within the first 2 days following occlusion. As compared to the untreated group, treatment with P-5-P, aspirin, or P-5-P and aspirin showed lower mortality rates of 15%, 25%, 15%, respectively (Figure 1).

[0142] Acute myocardial infarction resulted in a total mortality of 35% % in the untreated group of rats in 21 days. The highest mortality occurred within the first 2 days following occlusion. As compared to the untreated group, treatment with P-5-P, captopril, or P-5-P and captopril showed lower mortality rates of 10%, 15%, 20%, respectively (Figure 2).

[0143] Acute myocardial infarction resulted in a total mortality of 35% % in the untreated group of rats in 21 days. The highest mortality occurred within the first 2 days following occlusion. As compared to the untreated group, treatment with P-5-P, propranolol, or P-5-P and propranolol showed lower mortality rates of 15%, 20%, 20%, respectively (Figure 3).

[0144] Acute myocardial infarction resulted in a total mortality of 35% % in the untreated group of rats in 21 days. The highest mortality occurred within the first 2 days following occlusion. As compared to the untreated group, treatment with P-5-P, verapamil, or P-5-P and verapamil showed lower mortality rates of 15%, 25%, 10%, respectively (Figure 4).

[0145] In addition to captopril, other angiotensin converting enzyme inhibitors, such as, for example, enalapril or imidapril, can similarly be administered in place of captopril. In addition to verapamil, other known calcium channel blockers, such as, for example, nifedipine or diltiazem, can similarly be administered in place of verapamil. In addition to propranolol, other β-adrenergic receptor antagonists such as, for example, atenolol, timolol, and metoprolol can

similarly be administered in place of propranolol. In addition to aspirin, other antithrombolytic agents such as, for example, antiplatelet agents and heparin can similarly be administered in place of aspirin. Additionally, angiotensin II receptor antagonists such as, for example, losartan and valsartan can be used in the above example.

[0146] These animals are used in Examples 11 and 12 below. For EKG studies, these animals are used as their controls before surgery, so that before surgery is done on these animals EKG traces are taken which are then used as controls for the same animals after surgery.

Example 11: In Vivo - Hemodynamic Changes

[0147] The animals are prepared and grouped as described in Example 10 and were anesthetized with a solution of ketamine/xylazine which was injected. To maintain adequate ventilation, the trachea was intubated; the right carotid artery was exposed for introducing a microtip pressure transducer (model SPR-249, Millar, Houston, TX) into the left ventricle. The catheter was secured with a silk ligature around the artery, and various hemodynamic parameters such as left ventricular systolic pressure (LVSP), left ventricular end diastolic pressure (LVEDP), rate of contraction (+dp/dt), rate of relaxation (-dP/dt) were recorded and calculated on a computer system using a Acknowledge 3.1 software.

[0148] Once the hemodynamic parameters were measured the animals were sacrificed and hearts removed for measurement of heart weight, right ventricular weight, left ventricular weight and scar weight. Because complete healing of the scar in rats after coronary occlusion requires approximately 3 weeks, scar weight were measured only at 21 days.

[0149] Figures 5-8 demonstrate that the occlusion of coronary artery in rats for 21 days produces a significant scar evident by scar weight. Furthermore, Figures 5-8 demonstrate that P-5-P has a significant beneficial effect on scar weight in groups where P-5-P treatment is either given alone or in combination with verapamil, aspirin, captopril, or propranolol, respectively.

[0150] Figures 9-12 demonstrate that P-5-P has a significant beneficial effect on rate of contraction (+dP/dt) in groups where P-5-P treatment is either given alone or in combination with verapamil, aspirin, captopril, or propranolol, respectively.

[0151] Figures 13-16 demonstrate that P-5-P has a significant beneficial effect on rate of relaxzation (+dP/dt) in groups where P-5-P treatment is either given alone or in combination with verapamil, aspirin, captopril, or propranolol, respectively.

[0152] Figures 17-20 demonstrate that P-5-P has a significant beneficial effect on rate of left ventricular end diastolic pressure (LVEDP) in groups where P-5-P treatment is either given alone or in combination with verapamil, aspirin, captopril, or propranolol, respectively.

[0153] Figures 21-24 demonstrate that P-5-P has a significant beneficial effect on whole heart weight in groups where P-5-P treatment is either given alone or in combination with verapamil, aspirin, captopril, or propranolol, respectively.

[0154] Figures 25-28 demonstrate that P-5-P has a significant beneficial effect on right ventricular weight in groups where P-5-P treatment is either given alone or in combination with verapamil, aspirin, captopril, or propranolol, respectively.

[0155] In addition to captopril, other angiotensin converting enzyme inhibitors, such as, for example, enalapril or imidapril, can similarly be administered in place of captopril. In addition to verapamil, other known calcium channel blockers, such as, for example, nifedipine or diltiazem, can similarly be administered in place of verapamil. In addition to propranolol, other β-adrenergic receptor antagonists such as, for example, atenolol, timolol, and metoprolol can similarly be administered in place of propranolol. In addition to aspirin, other antithrombolytic agents such as, for example, antiplatelet agents and heparin can similarly be administered in place of aspirin. Additionally, angiotensin II receptor antagonists such as, for example, losartan and valsartan can be used in the above example.

Example 12: In Vivo - Hypertension

[0156] It has been well demonstrated by various investigators that feeding 8-10% sucrose in water induces hypertension in rats. Zein et al., Am. Coll. Nutr., 17 (1), 36-37, 1998; Hulman et al., Pediatr. Res., 36:95-101; Reaven et al., Am. J. Hypertens; 1991:610-614. In applying this model, the concurrent administration of pyridoxal-5'-phosphate and captopril or verapamil significantly decreases the sucrose-induced increase in systolic blood pressure (SBP).

[0157] The blood pressure is monitored using the tail cuff method. The SBP is detected on an amplifier and the Acknowledge™ computer software program is used to determine the calculations.

[0158] The effect of concurrent administration of pyridoxal-5'-phosphate and captopril or verapamil on systolic blood pressure (marker of hypertension) in 10% sucrose induced hypertension in rats is determined.

[0159] Figures 29A and 9B demonstrate that P-5-P has a significant beneficial effect on systolic blood pressure in groups where P-5-P treatment is either given alone or in combination with verapamil or captopril 1 week prior to inducing hypertension in rats with a sucrose diet.

[0160] Figures 29A and 29B demonstrate that P-5-P has a significant beneficial effect on systolic blood pressure in groups where P-5-P treatment is either given alone or in combination with verapamil or captopril 1 week prior to inducing hypertension in rats with a sucrose diet.

[0161] Figures 30A and 30B demonstrate that P-5-P has a significant beneficial effect on systolic blood pressure in groups where P-5-P treatment is either given alone or in combination with verapamil or captopril the same day as inducing hypertension in rats with a sucrose diet.

[0162] Figures 31A and 31B demonstrate that P-5-P has a significant beneficial effect on systolic blood pressure in groups where P-5-P treatment is either given alone or in combination with verapamil or captopril two weeks after inducing hypertension in rats with a sucrose diet.

[0163] In addition to captopril, other angiotensin converting enzyme inhibitors, such as, for example, enalapril or imidapril, can similarly be administered in place of captopril. In addition to verapamil, other known calcium channel blockers, such as, for example, nifedipine or diltiazem, can similarly be administered in place of verapamil. In addition to propranolol, other β-adrenergic receptor antagonists such as, for example, atenolol, timolol, and metoprolol can similarly be administered in place of propranolol. Additionally, angiotensin II receptor antagonists such as, for example, losartan and valsartan can be used in the above example.

[0164] It should be noted that, as used in this specification and the appended claims, the singular forms "a," "an," and "the" include plural referents unless the content clearly dictates otherwise. Thus, for example, reference to a composition containing "a compound" includes a mixture of two or more compounds.

[0165] Although embodiments of the invention have been described above, it is not limited thereto, and it will be apparent to persons skilled in the art that numerous modifications and variations form part of the present invention insofar as they do not depart from the spirit, nature, and scope of the claimed and described invention.

[0166] All references, applications, and patents cited herein are incorporated by reference.